

## CLAIMS

1. A view angle control sheet characterized in that lens portions having trapezoidal shapes in section are arranged at predetermined intervals, a wedge-shaped portion between said lens portions adjacent to each other is filled with the same material as said lens portion or with a material different from said lens portion, said wedge-shaped portion has a bottom surface on a screen image source side while having a leading end on an observer side, and the following relationships hold:

$$N_x \leq N_y$$

$$-0.01 < \Delta n - \cos\theta < 0.002$$

where  $N_x$  is a refractive index of a material constituting at least a slope portion of the wedge-shaped portion,  $N_y$  is a refractive index of a material constituting said lens portion, and  $\Delta n$  is a ratio ( $N_x/N_y$ ) of said refractive index  $N_x$  to said refractive index  $N_y$ , and:

a sectional shape of said wedge-shape portion has a wide bottom surface on the screen image source side.

2. A view angle control sheet according to claim 1, characterized in that, assuming that  $\theta$  is an angle formed by the slope portion of said wedge-shaped portion and a normal line of a light beam outgoing plane,  $\theta$  ranges from 3 degrees to 15 degrees.

3. A view angle control sheet according to claims

1 or 2, characterized in that a sectional shape of said wedge-shaped portion is substantially an isosceles triangle.

4. A view angle control sheet according to any one of claims 1 to 3, characterized in that said slope portion has a curved sectional shape and/or a polygonal-line sectional shape such that the screen image source side differs from the observer side in an angle formed by said slope portion and an observer-side surface.

5. A view angle control sheet according to any one of claims 1 to 4, characterized in that said wedge-shaped portion has a light-absorbing effect.

6. A view angle control sheet according to claim 5, characterized in that said wedge-shaped portion is filled with a material to which light-absorbing particles are added.

7. A view angle control sheet according to claim 6, characterized in that said wedge-shaped portion is formed in a wedge shape having a wide bottom surface on the screen image source side, and an average particle size of said light beam absorption particles is 1  $\mu\text{m}$  or larger.

8. A view angle control sheet according to claims

6 or 7, characterized in that an addition amount of light-absorbing particles ranges from 10 to 50 volume% in the material with which said wedge-shape portion is filled.

9. A display device characterized in that one view angle control sheet according to any one of claims 1 to 8 is laminated on the observer side of a screen image source or two view angle control sheets according to any one of claims 1 to 8 are laminated on the observer side of the screen image source while being substantially orthogonal to each other.

10. A view angle control sheet according to any one of claims 1 to 9, characterized in that a function of any one of AR, AS, AG, and a touch sensor or a plurality of functions thereof are imparted to at least one surface side.

11. A display device characterized in that a view angle control sheet according to any one of claims 1 to 10 is bonded.